

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

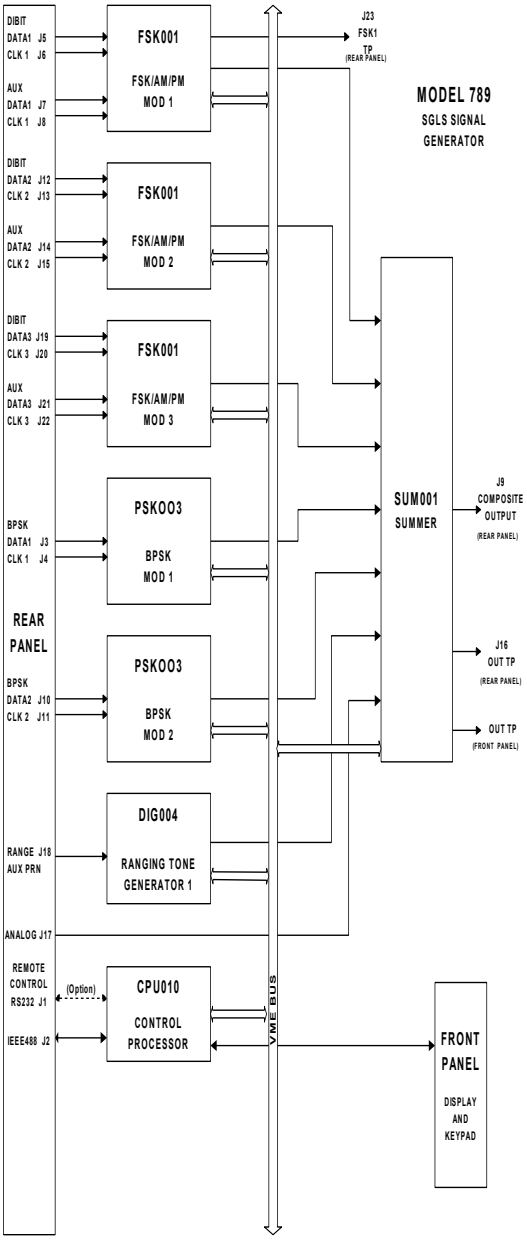
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Delta Information Systems / GDP Space Systems DIG004* at our website: *Click HERE*

SGLS SIGNAL SYSTEM

Model 789





The Model 789 SGLS Signal Generator is part of the GDP Space Systems' Modular Subcarrier System (MSS) family. The MSS family provides high performance Phase Shift Keyed (PSK), Frequency Shift Keyed (FSK), Phase Modulation (PM), Space Ground Link System (SGLS) and Digital Baseband (BB) signal generation. Upconversion can also be added to translate subcarrier frequencies to a 70 MHz output signal. Direct Digital Synthesis (DDS) techniques are used to produce the subcarriers at frequencies up to 10 MHz. The MSS modular architecture utilizes a series of VME based modules which can be readily configured for generation of PSK, FSK, PM, SGLS, and Digital BB signals.

The GDP Space Systems Model 789 SGLS Signal Generator provides multi-channel Space Ground Link System (SGLS) compatible Telemetry Tracking and Command (TT&C) and communication subcarrier signals.

The model 789 includes three FSK/AM/PM Modulators, two BPSK Modulators, a Ranging Tone Generator, and a Signal Summer/Level Control module. The unit accepts three SGLS dibit encoded data/clock and three auxiliary data/clock inputs for FSK subcarrier modulation; two data and clock inputs for BPSK subcarrier modulation; a ranging signal input for Range Tone output selection; and an external analog input channel. An internal pseudo-random noise (PRN) generator can be selected in place of any of the external data inputs. Signal level control and ON/OFF selection is provided for each Modulator output, the digital baseband ranging signal , and the buffered analog input signal. The Modulator and Range Tone Generator outputs and the external analog signal are routed to the Summer. Up to four-of-seven signals are combined to produce a Composite Output signal. Individual signal level and ON/OFF control is provided for the four selected signals on the Summer, as well as selectable attenuation of the composite output. All selectable functions are controlled through either the local front panel display and keypad, or the IEEE-488 remote control port.

300 Welsh Road · Building 3 · Horsham, PA 19044-2273 **URL: http://www.gdpspace.com**
Phone: 215-657-5270 Fax: 215-657-5273 **E-mail: gdpinfo@gdpspace.com**

SGLS SIGNAL SYSTEM

Model 789

SPECIFICATIONS

PSK MODULATORS
External Modulation Data Inputs:
Data & Clock (0-degree clock required for code conversion)
- Input data rates: DC to 2 Mbps TTL signal levels, unbalanced

Input Code conversion:
- NRZ-L/M/S; BiPhase-L/M/S; DM-M/S; BYPASS

Internal PRN Generator:
Pattern: 2047 (N=11); 2,11 taps (4 Kbps, 32 Kbps, 64 Kbps)

Sub-Carrier Generator
Frequency: Selectable to 10 MHz;
Resolution: 1 Hz
Frequency Accuracy: +/- 100 ppm; Optional, to 1 ppm.

FSK/AM/PM MODULATOR (SGLS)
External Data Inputs: TTL levels into 50 Ohms, unbalanced
SGLS Formatted Dibit Data and Clock:
Auxiliary Serial Data and Clock
Ternary Data (1,0,S) and Clock
95 KHz, 76 KHz, 65 KHz; or
385 KHz, 366 KHz, 365 KHz.
Binary FSK Modulation
Frequency Accuracy: +/- 100 ppm, standard.
PM Modulation to 10 MHz
Modulation Index: Selectable, 0.00 to 3.14 radians

COMPOSITE OUTPUT
Output Impedance: 75 Ohms (50 Ohms, optional)
Output Level, each sub-carrier: 1 V_{pk-pk} (nominal), at +3dBm setting
Output Level Adjustments
Each subcarrier: +3 dBm to -30 dBm, in 0.1 dBm steps
Composite: 0 to 7.5 dB Attenuation, in 0.5 dB steps
Test Ports: Fixed Attenuation (-10 dB nominal) of Composite signal.
Performance
Signal On/Off Switching Isolation: 60 dBc
Spurious: -45 dBc
Harmonics: -40 dBc
IM^3: -45 dBc

LOCAL FRONT PANEL CONTROL
VF Display and Keypad
Vacuum Fluorescent (VF) display
2-line by 40-character format
Twenty (20) position keypad

REMOTE CONTROL
IEEE- 488; RS-232

MISCELLANEOUS
Power: 115 Vac +/- 5%, Single Phase, 47-63 Hz, 300 watts, max
Size: 10.5 (H) x 22 (D) x 19 (W), inches
Weight : 70 lbs
Mounting: Std. 19" EIA rack w/ slides
Environment: Temp: +10 to +40 degrees C
RH: 15 to 85%, no cond.
Altitude: 0 to 10,000 ft.

Ordering Information

789-00	Basic Unit
OP789-01	1PPM Oscillators

Recognizing that no standard product can meet all the needs of all users, GDP stands ready to provide units tailored to unique applications.

The statements in this data sheet are not intended to create any warranty, expressed or implied. Equipment specifications are subject to change without notice.

300 Welsh Road · Building 3 · Horsham, PA 19044-2273 **URL: http://www.gdpspace.com**
Phone: 215-657-5270 Fax: 215-657-5273 **E-mail: gdpinfo@gdpspace.com**
© 2003-17 GDP Space Systems, Inc.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP